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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/517,353

03/02/2000

Chad Byron Moore

MRE-9

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20808

7590

12/28/2005

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EXAMINER

DOAN, JENNIFER

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/517,353

Applicant(s)

MOORE, CHAD BYRON

Examiner

Jennifer Doan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 29-35, 38, 39 and 41-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-26, 29-35, 38, 39 and 41-45 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 12, 46 and 47 is/are rejected.
- 7) ☒ Claim(s) 3-11 and 14-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's amendment filed on October 12, 2005 has been considered and entered. The arguments advanced therein, considered together with the amendment made to the claims, are not persuasive. In view of scrutiny of the claims, it is discovered that the rejection based on the Goldman et al. (U.S. Patent 4,928,695) and Rockwell, III (U.S. Patent 5,748,825) references is still pertinent to the claims. Therefore, the previous rejection is maintained. This action is made final.

Specification

1. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

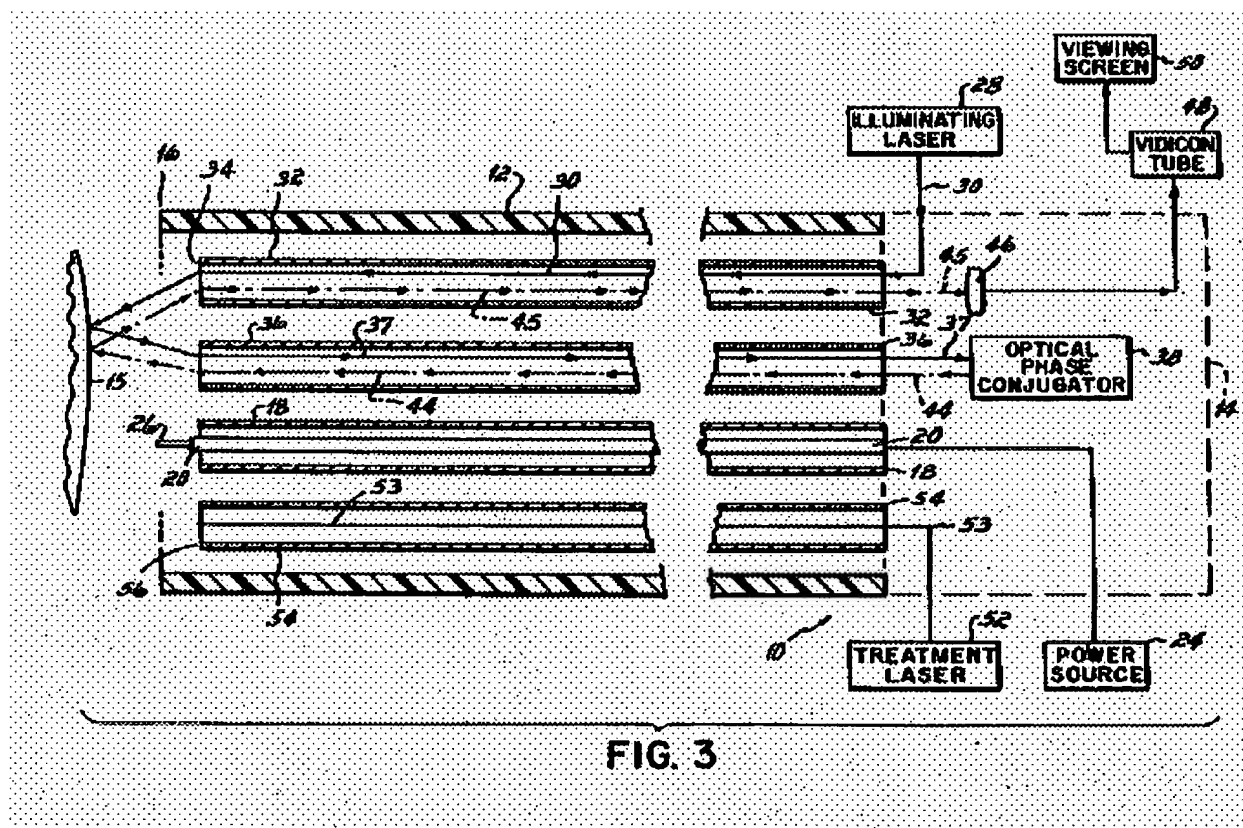
3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldman et al. (U.S. Patent 4,928,695).

With respect to claim 1, Goldman et al. (figure 3) disclose a fiber for use in an electronic display (column 1, lines 5-10 and column 6, line 12), wherein the fiber (32)

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comprises at least one electrode (column 5, lines 6-7 and column 7, lines 61-63) and a lens function designed into at least a part of the fiber (Goldman et al. (figure 3, column 5, lines 42-50 and column 6, lines 1-8) teach an optic fiber (12) is **focusing and reflecting** (as a lens function) the laser beam (30).

With respect to claim 2, Goldman et al. (column 1, lines 5-10 and column 6, line 12) disclose a fiber for use in an electronic display, wherein the electrode is a metal wire electrode contained within or on the surface of the fiber.



4. Claim 46 is rejected under 35 U.S.C. 102(b) as being anticipated by Takano et al. (U.S. Patent 4,978,195).

Takano et al. (column 2, line 58 – column 3, lines 2) disclose an electric display comprising at least one fiber to form structure within the display comprising a wire electrode to carry a majority of a current along a length of the fiber and a transparent electrode connected to the wire electrode to spread a charge from the wire electrode across at least a portion of a surface of the fiber.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman et al. (as cited above).

With respect to claim 12, Goldman et al. substantially disclose all the limitations of the claimed invention except the fiber is composed of a material selected from the group consisting of glass and plastic. However, the fiber being composed of a material selected from the group consisting of glass and plastic is considered to be obvious.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the glass and plastic to create the fiber, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 125 USPQ 416.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman et al. (as cited above) in view of Rockwell, III (U.S. Patent 5,748,825).

With respect to claim 13, Goldman et al. substantially disclose all the limitations of the claimed invention except at least one part of the fiber is colored.

However, Rockwell, III (column 20, lines 19-21) discloses at least one part of the fiber is colored to carry one color of light across the screen. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Goldman device with the fiber being colored at least on one part (accordance with the teaching of Rockwell, III) for the purpose of obtaining a high efficiency color display.

8. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. (as cited above).

With respect to claim 47, Goldman et al. substantially disclose all the limitations of the claimed invention except the fiber is composed of a material selected from the group consisting of glass and polymer. However, the fiber being composed of a material

selected from the group consisting of glass and polymer is considered to be obvious. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the glass and polymer to create the fiber, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

9. Claims 3-11 and 14-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose or reasonably suggest a fiber, wherein the lens function changes a direction of the light passing through the fiber as recited in claim 3; wherein the lens function changes a focus of the light passing through the fiber as recited in claim 4; Wherein the lens function is located on at least one section of at least one surface of the fiber as recited in claim 5; further the lens function is created inside the fiber using a material to form the lens having a different index of refraction than the fiber material as recited in claim 8; further the fiber comprising at least one absorbing region and one reflecting region within the fiber or on the fiber surface which create an aperture as recited in claims 9-11; wherein the lens function corrects for a chromatic aberration as recited in claim 14; further wherein the display is a multiple and three-dimensional display as recited in claims 15 and 16.

10. Claims 20-26, 29-35, 38-39 and 41-45 are allowed.

The prior art fails to disclose or reasonably suggest a fiber for use in an electronic display, wherein one absorbing region within the fiber or on the fiber surface which creates an aperture as recited in claim 20; wherein the transparent materials form a lens within the fiber as recited in claim 26 and wherein a plurality of alternating high and low index of refraction material regions are formed within the fiber such that the regions redirect light passing through the fiber as recited in claim 29; wherein light traveling through the lens in the fiber travels orthogonal to a long axis of the fiber as recited in claim 42; further an aperture in the fiber such that the aperture is formed by at least one optically absorbing or reflecting region as recited in claim 44.

The prior art also fails to disclose or reasonably suggest subdividing a voltage that creates the appearance of depth in at least one pixel location between more than one of the electrodes in the at least one pixel location such that the appearance of depth is perceived by a viewer to be between either appearance of depth created by applying the voltage to any one of the electrodes as recited in claim 38.

Response to Arguments

11. Applicants' argument filed on October 12, 2005 has been fully considered.

12. With respect to claims 1 and 2:

On page 9 of the remarks, it is argued that the Goldman et al. do not disclose a fiber for use in an electronic display.

The examiner respectfully submits that the Goldman et al. reference explicitly discloses a fiber for use in an electronic display (column 6, line 12).

On page 9 of the remarks, it is also argued that the Goldman et al. do not disclose a lens designed into at least a part of a fiber.

The examiner disagrees with this argument because claim 1 only recites "**a lens function** designed into at least a part of the fiber". It does not recite "a lens designed into at least a part of the fiber". Furthermore, Goldman et al. (figure 3, column 5, lines 42-50 and column 6, lines 1-8) specifically disclose an optic fiber (12) is focusing and reflecting the laser beam (30). It is well known that the lens is functioned for focusing and reflecting the light beam. Therefore, the lens function is inherent in the optical fiber of Goldman to focus and reflect the laser beam.

Please refer to claim rejection 35 U.S.C. 102 above for claims 1 and 2.

Please refer to claim rejection 35 U.S.C. 102 above for newly added claim 46.

Please refer to claim rejection 35 U.S.C. 103 above for claims 12, 13 and newly added claim 47.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent Examiner

December 14, 2005